

Claims

- [c1] A side airbag for a supplemental restraint system of a vehicle, comprising:
an inflatable bag having a shoulder-receiving portion and a thorax-receiving portion that extends from said shoulder-receiving portion;
wherein said inflatable bag is moveable between a deflated configuration and an inflated configuration, said thorax-receiving portion being sized thinner than said shoulder-receiving portion in a lateral direction when said inflatable bag is disposed in said inflated configuration.
- [c2] The side airbag of claim 1 wherein said thorax-receiving portion has an inboard side and an outboard side that is fastened to said inboard side substantially across said thorax-receiving portion.
- [c3] The side airbag of claim 1 wherein said thorax-receiving portion has an inboard side and an outboard side with at least one seam threadably attaching said inboard side to said outboard side.
- [c4] The side airbag of claim 3 wherein said at least one seam

extends from a bottom portion of said thorax-receiving portion toward a top portion of said thorax-receiving portion.

[c5] The side airbag of claim 3 wherein said at least one seam terminates at an end with a circular pattern stitching for preventing said inflatable bag from tearing at said end of said at least one seam.

[c6] The side airbag of claim 3 wherein said inflatable bag is coupled to at least one of a vehicle seat and a vehicle door.

[c7] A side airbag for a supplemental restraint system of a vehicle, comprising:
an inflatable bag having a shoulder-receiving portion and a thorax-receiving portion that extends from said shoulder-receiving portion, said shoulder-receiving portion and said thorax-receiving portion each having an inboard side and an outboard side; and
at least one tether coupled to said thorax-receiving portion and in connection between said inboard side and said outboard side of said thorax-receiving portion;
wherein said inflatable bag is moveable between a deflated configuration and an inflated configuration, said thorax-receiving portion being sized thinner than said shoulder-receiving portion in a lateral direction when

said inflatable bag is disposed in said inflated configuration.

[c8] The side airbag of claim 7 wherein said at least one tether has an outboard end portion sewn to said outboard side of said thorax-receiving portion and an inboard end portion sewn to said inboard side of said thorax-receiving portion.

[c9] The side airbag of claim 7 wherein said thorax-receiving portion has an upper portion and a lower portion, said upper portion having a first plurality of tethers in connection between said inboard side and said outboard side, said lower portion having a second plurality of tethers in connection between said inboard side and said outboard side.

[c10] The side airbag of claim 9 wherein said first plurality of tethers are longer in length than said second plurality of tethers.

[c11] The side airbag of claim 10 wherein said first plurality of tethers are more than twice the length of said first plurality of tethers.

[c12] The side airbag of claim 9 wherein said first plurality of tethers are arranged in a row from a rear portion of said inflatable bag to a front portion of said inflatable bag.

- [c13] The side airbag of claim 9 wherein said second plurality of tethers are arranged in a row from a rear portion of said inflatable bag to a front portion of said inflatable bag.
- [c14] The side airbag of claim 7 wherein said inflatable bag is comprised of an inboard panel and an outboard panel that is coupled to said inboard panel.
- [c15] The side airbag of claim 7 wherein said inboard panel and said outboard panel are each comprised of a flexible cloth.
- [c16] The side airbag of claim 7 wherein said inflatable bag is coupled to at least one of a vehicle seat and a vehicle door.
- [c17] A supplemental restraint system for a vehicle, comprising:
an inflatable bag coupled to the vehicle, said inflatable bag having a shoulder-receiving portion and a thorax-receiving portion that extends from said shoulder-receiving portion;
an inflation device coupled to said inflatable bag for inflating said inflatable bag; and
a crash sensor coupled to said inflation device for detecting a vehicle impact event and actuating said infla-

tion device to inflate said inflatable bag;
wherein said inflatable bag is moveable between a deflated configuration and an inflated configuration, said thorax-receiving portion being sized thinner than said shoulder-receiving portion in a lateral direction when said inflatable bag is disposed in said inflated configuration.

[c18] The side airbag of claim 17 wherein said thorax-receiving portion has an inboard side and an outboard side that is fastened to said inboard side substantially across said thorax-receiving portion.

[c19] The side airbag of claim 18 wherein said thorax-receiving portion has an upper portion and a lower portion, said upper portion having a first plurality of tethers in connection between said inboard side and said outboard side, said lower portion having a second plurality of tethers in connection between said inboard side and said outboard side.

[c20] The side airbag of claim 18 wherein said thorax-receiving portion has an inboard side and an outboard side with at least one seam threadably attaching said inboard side to said outboard side.